

REMARKS

Further examination and reconsideration of the subject application, in view of the remarks below, are respectfully requested. Claims 1-18 and 22-83 are pending in the case and presented for reconsideration. New claims 85-87 have been added. Claims 33, 36, 48-49, 52, 54-60, 67-75, and 81-82 have been amended.

Rejection under 35 U.S.C. § 112, first paragraph

Claims 1-18 and 22-83 were rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. This rejection should be withdrawn for the following reasons.

MPEP§ 2112.03 states that the transitional phrase "consisting essentially of" limits the scope of a claim to the specified materials or steps "and those that do not materially affect the basic and novel characteristic(s)" of the claimed invention. Further, the invention necessarily includes the listed ingredients and is open to unlisted ingredients that do not materially affect the basic and novel properties of the invention.

The specification of the present invention (summary of the invention) states the following:

"Applicants have unexpectedly discovered that the cosmetically unacceptable odor associated with alkyl acetates such as methyl acetate is substantially reduced when combined with alcohols such as ethanol, and that alkyl acetates can thus replace some of the alcohol in consumer spray formulations without lessening consumer acceptance. Applicants have also unexpectedly discovered that ethanol inhibits the hydrolysis of methyl acetate in the presence of water, thereby reducing the formation of harmful acids in formulations that contain water. Ethanol also inhibits the detrimental effects that methyl acetate by itself can cause to some fabrics.

Thus, certain alkyl acetates (particularly methyl acetate and/or t-butyl acetate) unexpectedly can be used to replace part of the alcohol (particularly isopropanol and/or ethanol) in consumer spray formulations without adversely affecting the performance, odor, or shelf stability of the hair spray. This is an important consideration, because methyl acetate is a "negligibly reactive" VOC and is thus more environmentally acceptable than ethanol. Measurements show that methyl acetate generates 0.03 gram ozone per gram solvent, compared to ethanol

which generates 0.42 gram ozone per gram solvent. Thus it is possible to formulate an improved hair spray providing most of the properties considered desirable for hair grooming and having a lower potential to generate ground-level ozone.

In accordance with the purpose(s) of this invention, as embodied and broadly described herein, this invention, in one aspect, relates to a hair care composition comprising a fixative, ethanol, and methyl acetate and/or t-butyl acetate."

Applicants maintain that the basic and novel characteristics of the present invention are hair care compositions that include fixatives, alkanol components such as ethanol, and methyl acetate and/or t-butyl acetate. Thus, the "consisting essentially of" transitional language is valid in that it limits the scope of the claims to this combination of elements while including other unlisted elements such as water, propellants and neutralizers that do not materially affect the basic and novel properties of the invention. Therefore, Applicants respectfully request withdrawal of this rejection.

Rejections under 35 U.S.C. § 112, second paragraph

Claims 33-49, 52, 54-60, 57-75 and 81-82 were rejected under 35 U.S.C. § 112, second paragraph, as failing to comply with the written description requirement. Claims 33, 36, 48-49, 52, 54-60, 67-75, and 81-82 have been amended to clarify the claim language. Applicants submit that the amendments to the claims overcome this rejection. As such, Applicants respectfully request withdrawal of this rejection.

Rejections under 35 U.S.C. § 103

Claims 1-18, 22-32, 36-53, 57-59, 61, 62 and 73-83 were rejected under 35 U.S.C. § 103(a) as being obvious over Madrange nee Dermain et al. (US 4,173,627, hereinafter "Madrange"). Claims 1-18, 22-32, 36-53, 57-59, 61, 62 and 73-83 were rejected under 35 U.S.C. § 103(a) as being obvious over Madrange (US 4,173,627) in view of JP 08187277. Claims 33-35, 56, 60 and 63-72 were rejected under 35 U.S.C. § 103(a) as being obvious over Madrange (US 4,173,627) in view of JP 08187277 and further in view of Chuang et al. (U.S. 5,830,439, hereinafter "Chuang"). Claims 54 and

55 were rejected under 35 U.S.C. § 103(a) as being obvious over Madrange (US 4,173,627) in view of JP 08187277 and further in view of Morawsky et al. (U.S. 5,599,524, hereinafter "Morawsky"). Applicants submit that the cited references individually and any combination of the cited references fail to disclose or suggest a hair care composition with the claimed combination of features in the present invention. For the following reasons, the rejections should be withdrawn.

Applicants submit that the presently claimed invention of claims 1-18, 22-32, 36-53, 57-59, 61, 62 and 73-83 is patentably distinguishable over Madrange. Applicants submit that Madrange does not disclose or suggest the claimed combination features of independent claim 1 or new claims 85-87. Claim 1 requires a hair care composition consisting essentially of:

- a. a fixative;
- b. 20 wt. % to 55 wt. % of an alkanol component comprising ethanol; and
- c. at least 10 weight % methyl acetate,

wherein the VOC of the composition does not exceed 80%.

Madrage discloses a hair spray fixative composition that is partially in the liquid phase and partially in the gaseous phase comprising at least one of: a) from 0-94 weight % of a lower alkanol such as ethanol, propanol, isopropanol or butanol; b) from 0-35 weight % of a solvent selected from 1,1,1-trichloroethane and methylene chloride; or c) from 0-25 weight % of a diluent selected from a ketone (such as acetone or MEK), an alkyl acetate (such as methyl acetate or ethyl acetate) or a hydrocarbon (such as a C3-C7 alkane); and always present constituent d) 5-30 weight % of a flammability reducing agent selected from bromotrifluoromethane.

Although Madrange discloses the use of ethanol or methyl acetate individually, it does not teach or suggest a hair care composition comprising both ethanol and methyl acetate in combination as claimed in the present invention. In Madrange, ethanol is a constituent and methyl acetate is presented along with a laundry list of other possible diluents that may be present in the hair spray fixative composition, but methyl acetate is not exemplified. Applicants submit that Madrange teaches only that each (ethanol or

methyl acetate) may present in a hair fixative composition individually and not in combination, as is presently claimed.

Further, Madrange actually teaches away from Applicants' inventive combinations as it discloses that both alkanols and alkyl acetates are not required components of the disclosed hair lacquer compositions (col. 3, lines 48-52). Although the examiner maintains that one skilled in the art would be motivated by Madrange to combine ethanol and methyl acetate in a hair fixative composition, Applicants respectfully disagree. Madrange clearly does not provide any motivation for using a combination of ethanol and methyl acetate in a hair fixative composition particularly since there is no expectation that such a combination would work and it would be contrary to the stated objective of Madrange. Thus, there is no motivation in Madrange to use the specific combination of features of the claimed invention.

Additionally, Madrange always utilizes a brominated flammability reducing agent, which is not included in the presently claimed invention. A brominated flammability reducing agent would materially affect the basic and novel properties of the present invention and is thus excluded from the claimed invention in light of the "consisting essentially of" language.

Applicants further maintain that the inventive combinations of ethanol and methyl acetate for use in a hair care composition would not have been obvious to one of ordinary skill in the art in light of Applicants' substantially superior and unexpected results. Specifically, Applicants have unexpectedly discovered that the cosmetically unacceptable odor associated with alkyl acetates, such as methyl acetate or t-butyl acetate, is substantially reduced when combined with an alcohol such as ethanol or isopropanol. Moreover, as compared to alcohol formulations, the compositions of the instant invention have a lower VOC, which is more environmentally acceptable. Thus, alkyl acetates can replace some of the alcohol currently present in many consumer spray formulations without lessening consumer acceptance (see specification at page 3, lines 16-29). Therefore, as it is desired for hair care compositions to preferably retain a pleasant odor, one of ordinary skill in the art would not have been motivated to combine methyl acetate or t-butyl acetate with an alcohol as claimed in the present invention.

Accordingly, for the reasons discussed above, Applicants respectfully submit that claims 1-18, 22-32, 36-53, 57-59, 61, 62 and 73-83 are patentably distinguishable over Madrange (U.S. 4,173,627) and respectfully request the rejection to be withdrawn. Further, Applicant submits that JP 08187277, Chuang, and Morawsky fail to remedy the deficiencies of the Madrange.

Claims 1-18, 22-32, 36-53, 57-59, 61, 62 and 73-83 were rejected under 35 U.S.C. § 103(a) as being obvious over Madrange (US 4,173,627) in view of JP 08187277. JP 08187277 discloses adding from 0.1 to 10 weight %, based on the weight of the alcohol, of an agent comprising an aliphatic ester for masking the irritating alcohol odor in alcohol based perfumes, cosmetics and food/beverage products. Although JP 08187277 discloses methyl acetate as a means for masking alcohol odors in specific products, the concentration of methyl acetate presented is, at most, less than 10 weight %, based on the weight of the alcohol. This is equal to about 5.5 weight % which is substantially less than what is currently claimed and is still within the parameters prescribed by Madrange. Applicants submit that nothing in Madrange or JP 08187277 would motivate one skilled in the art to use a concentration of methyl acetate greater than 5.5 weight %. Applicants submit that JP 08187277 teaches away from having a concentration of methyl acetate greater than 10 weight %, based on the weight of the alcohol, noting that at such greater concentrations the solvent effect of the ethanol could be compromised. Lastly, nothing in JP 08187277 would motivate one skilled in the art to remove from the hair fixative composition of Madrange the always present brominated flame retardant. This would be completely contrary to the teaching of Madrange. Accordingly, claims 1-18, 22-32, 36-53, 57-59, 61, 62 and 73-83 are patentably distinguishable over the combination of US 4,173,627 in view of JP 08187277. Applicants respectfully request that the rejection to be withdrawn.

Claims 33-35, 56, 60 and 63-72 were rejected under 35 U.S.C. § 103(a) as being obvious over Madrange in view of JP 08187277 and further in view of Chuang. Chuang discloses a hydrocarbon tolerant, aerosol hair spray composition which includes a fixative polymer which is a terpolymer resin consisting essentially of (a) about 15-45 weight % vinyl acetate, (b) about 5-40 weight % vinyl neononanoate or vinyl neodecanoate, (c) about 30-55 weight % mono-isobutyl maleate, and (d) 1-10 weight % isobornyl acrylate, N-t-butylacrylamide or N-t-octylacrylamide.

Applicants submit that Chuang would not motivate one skilled in the art to modify the teaching of Madrange either alone or in combination with JP 08187277 since it does not provide a reasonable expectation of success that a combination of methyl acetate and ethanol could be combined in the claimed concentrations to provide a hair care composition as is presently claimed. Moreover, Chuang does not motivate one skilled in the art to modify Madrange to eliminate the inflammability retardant. Applicants submit that Madrange in view of Chuang further supports such a inflammability retardant by clearly noting that the hair composition of Chaung is a hydrocarbon tolerant, aerosol hair spray composition, which were the compositions exemplified in Madrange.

Accordingly, Applicants submit that claims 33-35, 56, 60 and 63-72 are patentably distinguishable over Madrange (US 4,173,627) in view of JP 08187277 and further in view of Chuang et al. (U.S. 5,830,439), and respectfully request that the rejection to be withdrawn.

Claims 54 and 55 were rejected under 35 U.S.C. § 103(a) as being obvious over Madrange (US 4,173,627) in view of JP 08187277 and further in view of Morawsky. Morawsky discloses a hair spray composition comprising from 2-20 weight % of a fixative, from 0.6 to 5 weight % of one or more hydrophobic additives selected from hexamethyl disiloxane, bisphenyl hexamethicone and isocetyl alcohol, and 80 weight % or less of a volatile organic compound and the balance being water. Morawsky maintains that without the hydrophobic additives in the hair spray composition, many standard resins, when delivered by an aerosol system would foam at the actuator valve and on the hair. This problem was also recognized by Madrange. The difference is that Madrange utilized a special spray nozzle and Morawsky instead modified the surface tension of the hair fixative polymer, column 2, lines 1-3.

Applicants submit that Morawsky does not teach or suggest the hair fixative composition as is presently claimed. Moreover, Morawsky would not motivate one skilled in the art to modify either Madrange or JP 08187277, either alone or in combination, to derive the presently claimed invention. Although Morawsky teaches some of the same hair resins, Morawsky does not teach or suggest a hair composition

having both ethanol and methyl acetate in the claimed concentrations or that Madrange should be modified to eliminate the brominated inflammability retardant.

Applicants submit that Morawsky is not properly combinable with Madrange because Madrange teaches having a high level of hydrocarbons and Morawsky teaches using a level of VOCs of less than 80 weight % and preferably less than 55 weight %. At most, Madrange in view of Morawsky would suggest the addition of hydrophobic additives into the hair fixative composition of Madrange to improve the spray characteristics and to address the commonly recognized problem of foaming at the spray nozzle. However, Madrange in view of JP 08187277 and further in view of Morawsky et al. does not teach or suggest the presently claimed invention or motivate one skill in the art to remove the inflammability retardant as taught by Madrange. Accordingly, Applicants submit that claims 54 and 55 are patentably distinguishable over Madrange (US 4,173,627) in view of JP 08187277 and further in view of Morawsky et al. (U.S. 5,599,524) and respectfully request that the rejection to be withdrawn.

In sum, neither Madrange, JP 08187277, Chuang, nor Morawsky individually or in combination, discloses or suggests elements of Applicant's claimed invention: A hair care composition consisting essentially of:

- a. a fixative;
- b. 20 wt. % to 55 wt. % of an alkanol component comprising ethanol; and
- c. at least 10 weight % methyl acetate,

wherein the VOC of the composition does not exceed 80%.

And no rationale was provided by the Examiner that would have led to the modifications suggested in the Office Action. To support a rejection under 35 U.S.C. § 103, such rationale must be articulated by the Examiner. M.P.E.P. 2141(III), Eighth Edition, Rev. 6, Sept. 2007. Applicant respectfully notes that a *prima facie* case of obviousness has not been presented and requests the withdrawal of the 35 USC 103(a) rejections over Madrange, in view of JP 08187277, Chuang, and Morawsky. Additionally, Applicants submit that the cited references fail to disclose the compositions of new claims 85-87. As such, the new 85-87 are patentable over the cited references.

Conclusion

In summary, Applicants believe the application to be in condition for allowance. Accordingly, the Examiner is respectfully requested to reconsider the rejection(s), remove all rejections, and pass the application to issuance.

Respectfully submitted,

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